

Name: _____

Remediation – Exponent Rules – Multiplying Same Bases

After you have watched the video from the wiki, you should try the following problems and then use the key to check your work. There is not a great way to check these problems with your calculator.

Directions: Please simplify the following.

1. $3x^2 \cdot 6x^3 \cdot x^5$

Think this $\rightarrow (3 \cdot 6 \cdot 1)x^{2+3+5}$

Do this $\rightarrow (18x^10)$

2. $-3b(6b^6)(b^{11})$

Think this $\rightarrow (-3 \cdot 6 \cdot 1)b^{1+6+11}$

Do this $\rightarrow (-18b^{18})$

3. $-7(2g)(4g^5)$

Think this $\rightarrow (-7 \cdot 2 \cdot 4)g^{1+5}$

Do this $\rightarrow (-56g^6)$

4. $-4x^2y \cdot (3x^3y^5)$

Think this $\rightarrow (-4 \cdot 3)x^{2+3}y^{1+5}$

Do this $\rightarrow (-12x^5y^6)$

5. $-9x^7b^3(6bx^{-3})(xb)$

Think this $\rightarrow (-9 \cdot 6 \cdot 1)x^{7+3+1}b^{3+1+1}$

Do this $\rightarrow (-54x^5b^5)$

6. $\left(\frac{1}{2}a^3b^5\right)\left(\frac{2}{3}ab\right)$

Think this $\rightarrow \left(\frac{1}{2} \cdot \frac{2}{3}\right)a^{3+1}b^{5+1}$

Do this $\rightarrow \left(\frac{1}{3}a^4b^6\right)$

7. $-1x^5(2.3x^{-1})(4.2y)$

Think this $\rightarrow [-1(2.3)(4.2)]x^{5+(-1)}y$

Do this $\rightarrow (-9.66x^4y)$

8. $\left(\frac{2}{5}w^3\right)(4.5wy^5)(\frac{1}{3}y)$

Think this $\rightarrow \left[\frac{2}{5}(4.5)(\frac{1}{3})\right]w^{3+1}y^{5+1}$

Do this $\rightarrow (-1.8w^4y^6)$